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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/524,493	06/08/2005	Mark Geach	613-93	8630
23117 7590 01/28/2010 NIXON & VANDERHYE, PC 901 NORTH GLEBE ROAD, 11TH FLOOR ARLINGTON, VA 22203				
EXAMINER				
LEITH, PATRICIA A				
ART UNIT		PAPER NUMBER		
1655				
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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

10/524,493

Applicant(s)

GEACH, MARK

Examiner

Patricia Leith

Art Unit

1655

Period for Reply -- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 05 November 2009.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 70-79 is/are pending in the application.
- 4a) Of the above claim(s) 71-73 and 76-79 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 70, 74 and 75 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/SB-06)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date _____
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____

DETAILED ACTION

Status of the Claims

Claims 70-79 are currently pending in this application; Applicant having canceled claims 40-57 and 59-69 in the most recent amendment submitted on 11/05/09.

Election/Restrictions

Newly submitted claims 71-73 and 76-79 are directed to an invention that is independent or distinct from the invention originally claimed for the following reasons: Claims 71-73 and 76-79 are directed toward live fish (or insects for example) which is a completely different invention directed toward a live fish (or insect for example) which contains the composition of claim 70. The product of claims 71-73 and 76-79 is a different in structure and function and would require a separate search in the art which would prove burdensome. Moreover, claims 71-73 and 76-79 would provide for different issues under 35 USC 101 and 35 USC 112 First paragraph which are not required for the Invention of claims 70 and 74-75. (It is noted that there is no proper classification for claims 71-73 and 76-79 in that live fish for example (which are not transgenic animals) are not statutory subject matter).

Since applicant has received an action on the merits for the originally presented invention, this invention has been constructively elected by original presentation for prosecution on the merits. Accordingly, claims 71-73 and 76-79 withdrawn from consideration as being directed to a non-elected invention. See 37 CFR 1.142(b) and MPEP § 821.03.

Claims 70 and 74-75 were examined on their merits.

Rejections/Objections Removed

The previous rejections have been removed in light of Applicant's cancellation of the previously Objected and/or Rejected claims rendering said rejections moot.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 70, 74 and 75 are rejected under 35 U.S.C. 102(b) as being anticipated by Asami et al. (US 6,265,450).

Asami et al. (US 6,265,450) taught a drink composition comprising astaxanthin ethylester and in a liquid state (see Example 2, col. 12). The astaxanthin used by Asami et al. was clearly provided in suspended oil 'capsules' or otherwise as 'micelles' as provided by the Vitamin E (oil/fat-soluble vitamin):

Since astaxanthin and/or its ester is insoluble in water, it can be provided in capsules and so forth by suspending in oil either directly or using an emulsifier, astaxanthin and/or its ester can be dissolved in oil, emulsified in an aqueous solution containing surface active agent or polymer and so forth followed by dissolving the resulting emulsion in water, or it can be spray dried and provided in the form of a liquid or powder. Since the solubility of astaxanthin in oil is extremely low, although considerable time is required to dissolve crystals of astaxanthin in oil, the dissolution rate can be increased by using fine crystals. The solubility of astaxanthin also becomes extremely large when heated to 100.degree. C. or above.

On the other hand, esters of astaxanthin are highly soluble in oils, and can be easily dissolved in oils. Examples of such oils include vegetable oils such as soy bean oil, corn oil, rape seed oil, palm oil, olive oil, safflower oil, lemon oil, orange oil, peanut oil and sunflower oil, hardened oils produced by hydrogenating these oils, natural waxes such as lanolin, whale wax and bees wax, animal fats such as beef tallow, pork tallow and butter as well as wheat germ oil **and concentrated vitamin E oil**. In addition, glycerine fatty acid ester, sucrose fatty acid ester, sorbitan fatty acid ester, soy bean phospholipid, propylene glycol fatty acid ester and stearate diglyceride are used as emulsifiers.

(37) In addition, by enclosing astaxanthin and/or its ester using cyclic dextrin (.alpha.-cyclodextrin, .beta.-cyclodextrin and .gamma.-cyclodextrin), a powdered inclusion can be obtained that can be dissolved in water. (col. 9)

Hence, the encapsulation of astaxanthin esters in 'micelles' (formed by oil coating the astaxanthin and emulsifying) was well-known in the art at the time the invention was made.

It is noted that the Drink of Example 2 contained water-soluble vitamin C and fat-soluble vitamin E.

Applicant's claims state 'An animal feed enriched by'. The phrase 'animal feed' is merely an intended use of the composition and does not lend much patentable weight to the compositions; save for the fact that the prior art composition must not be precluded from fulfilling the intended use of the claims. There is no reason that can be gathered by the Examiner why the feed composition of Asami et al. would be precluded as being an animal feed and thus meets the limitation of 'animal feed.' Further, where the claims state 'enriched by,' since the composition clearly contains astaxanthin and Vitamin E, it can be said that the remaining ingredients of Example 2 (i.e., those components other than astaxanthin and Vitamin E) were 'enriched' with Vitamin E and astaxanthin. Hence, there is no difference between the composition of the claims and the composition of Asami et al.

Claim 75 states , 'wherein the astaxanthin is in the form of an oleoresin.' The specification teaches: "[p]referably, the lipids are fats and more preferably oils which

may be added along with one or more carotenoid as an oleoresin" (p. 8, specification, [0044]). Hence, the astaxanthin, mixed with oils as taught by Asami et al. is an 'oleoresin' according to Applicant's specification.

Hence, Asami et al. anticipate the claimed invention.

.Conclusion

No claims are allowed.

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

.Any inquiry concerning this communication or earlier communications from the examiner should be directed to Patricia Leith whose telephone number is (571) 272-0968. The examiner can normally be reached on Monday - Friday 8:30am-5:00pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Terry McKelvey can be reached on (571) 272-0775. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Patricia Leith/
Primary Examiner, Art Unit 1655

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